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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,746	05/01/2002	Andrew Simon Clegg	E22.12-0004	6006

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EXAMINER

TOATLEY, GREGORY J

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/049,746	Applicant(s) CLEGG, ANDREW SIMON	
	Examiner Gregory J. Toatley, Jr.	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8 and 12-15 is/are rejected.
- 7) ☒ Claim(s) 4, 9-11 and 16-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>050102</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement received January 31, 2002 has been considered and entered into the application. See attached 1449.

Specification

3. The examiner respectfully suggests that the Applicant carefully review the specification for idiomatic and grammatical errors, which may have inadvertently overlooked.

Claim Objections

4. Claims 21 – 25 are objected to because of the following informalities: The numbers 16 – 20, preceding the text of the claims, appear to be typographical error due to a “cutting and pasting” and of no import to the claims. For purposes of examination the numbers have been ignored. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3, 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite the limitation “the or each”, the meaning of which the examiner is unable to determine. The claims have been examined on the basis this limitation being ignored, i.e. in claim 3, the limitation will be stood to be “efficacy of each cell” in

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claim 7, the limitation will be understood to be "...frequency filtering the measured electrical signals" and in claim 8 "...frequencies from the electrical signals."

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 – 2, 5, 6, 12 – 15 are rejected under 35 U.S.C. 102(b) as being anticipated by the reference Jonsson (US 5457377 A). The reference of Jonsson discloses the claimed invention as follows:

1. A method of measuring the electrical efficacy of one or more battery cells for use in an uninterruptable power supply, the method comprising: measuring at least one of an a.c. component of a current through the battery cell or cells (**see 2;8-12**) and an a.c. component of a voltage across the said battery cell or cells (**see fig. 2, 9a and 9c, and the disclosure 3:23-25**), the a.c. component arising from a ripple current in the said battery cell or cells in use (**3:3-7**); and determining the electrical efficacy of the cell or cells on the basis of the or at least one of the measured a.c. current and voltage components(**3:9-12, 18-22 & 1:58-61**).

2. The method of claim 1, in which the step of determining the electrical efficacy includes obtaining a numerical value (**Z_B**) from the, or at least one of the, measured a.c. current and voltage components (**3:9-12**).

3. The method of claim 2, in which the electrical efficacy of the or each battery cell is determined by comparison of the said numerical value with a corresponding further numerical value obtained by measurement of a.c. current and/or voltage components from one or more different cells. (**Z_{max}, see claims 1 and 8 of the reference**).

5. The method of claim 2, in which the electrical efficacy of the battery cell or cells is determined by comparison of the said numerical value with a corresponding predetermined numerical value. (**Z_{max}, see claims 1 and 8 of the reference**).

6. The method of claim 1, further comprising the steps of measuring both the a.c. component of current through the battery cell or cells and the a.c. component of the voltage across the battery cell or cells; and obtaining a value for the internal impedance of the battery cell or cells via a combination of the said current component and the said voltage component (**see again Z_{max}, see claims 1 and 8 of the reference**).

12. An apparatus for measuring the electrical efficacy of one or more battery cells for use in an uninterruptable power supply, the apparatus comprising an ammeter arranged to measure an a.c. component of a current through the battery cell or cells, the a.c. current component arising from a ripple current in the said battery cell or cells in use, the electrical efficacy of the cell or cells being determined on the basis of the measured a.c. current component. (**see claim 1, above**)

13. An apparatus for measuring the electrical efficacy of one or more battery cells for use in an uninterruptable power supply, the apparatus comprising a voltmeter arranged to measure an a.c. component of a voltage across the battery cell or cells, the a.c. voltage component arising from a ripple current in the said battery cell or cells in use, the electrical efficacy of the cell or cells being determined on the basis of the measured a.c. voltage component. (**s claim 1, above**)

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14. An apparatus as claimed in claim 13 further comprising an ammeter arranged to measure an a.c. component of a current flowing through the battery cell or cells, the a.c. current component also arising from the said ripple current in the said battery cell or cells in use, the electrical efficacy of the cell or cells being determined on the basis of both the measured voltage component and the a.c. current component. **(see claim 1, above)**

15. An apparatus as claimed in claim 14, in which the electrical efficacy is determined on the basis of an impedance calculated from the ratio of the said measured a.c. voltage component to the said measured a.c. current component. **(see claim 1, above and the equation in 3:11).**

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the reference of Jonsson as applied to claim 1 above, and further in view of the reference WO 93-25917-A ('917). The reference of Jonsson is silent regarding the measurement of each cell as claimed. The reference '917 suggests such a measurement on page 3, lines 16-18 and in reference to embodiment 3). It would have been obvious to one having ordinary skill in the art to incorporate the teaching of an individual cell measurement of reference '917 into the invention of Jonsson in order to increase the accuracy of measurement of the efficacy of the battery of cells as is suggested by the reference '917)

Allowable Subject Matter

11. Claims 4, 9 – 11, 16 – 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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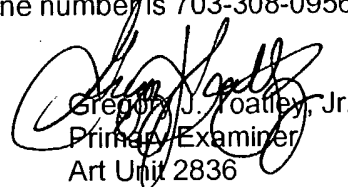
12. Claims 7 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: Prior art of record does not teach or suggest the frequency filtering as claimed, in claims 7, 16 and 21; and the comparison of the numerical value of the average of a plurality of A.C. components corresponding to a plurality of separate arrays of cells as claimed in claim 4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Toatley, Jr. whose telephone number is 703-308-7889. The examiner can normally be reached on Mon. - Fri. 7:00 a.m. to 3 p.m.. After January 28, 2004, the examiner can be reached at (571) 272-2059.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703) 308-3119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Gregory J. Toatley, Jr.
Primary Examiner
Art Unit 2836

GJT Jr.